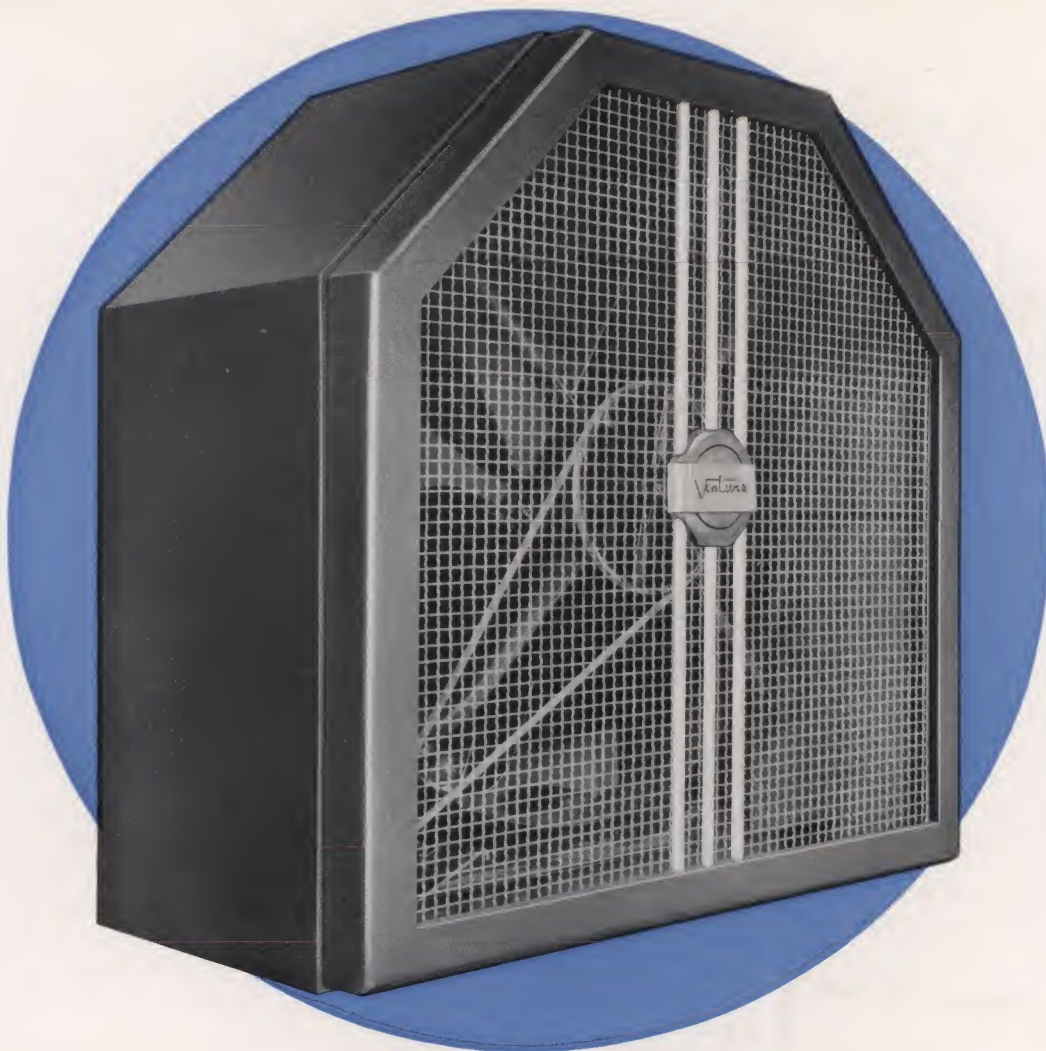


Comfort Cooling

BY
ATTIC VENTILATION



AMERICAN BLOWER CORPORATION
Division of American Radiator and Standard Sanitary Corporation
DETROIT • MICHIGAN



Ventura Home Conditioner

THE Attic Fan designed and styled for the Modern Home • Compact • Self-Contained • Acoustically Treated Steel Cabinet • Black Morocco Crinkled Finish • Rubber Mounted • Quiet in Operation • Certified Ratings • Efficient • Low Operating Cost • Guaranteed Performance • Furnished with or without Decorative Grille.

STANDARD TEST CODE

Recognizing not only the desirability but the necessity of a standard method of testing fans and blowers in order to give them proper ratings, a joint committee was selected in 1923 by the American Society of Heating and Ventilating Engineers and the National Association of Fan Manufacturers to prepare a Standard Test Code.

The American Blower Corporation, realizing the importance of such a move for the protection of their customers, adopted this code as a means of testing all their fans.

The complete line of Ventura Home Conditioners, Portable Conditioners and Aeropel Ventilators have been tested in accordance with the Standard Test Code and the capacity tables shown in this catalog are certified. Look for the name-plate which shows, "Ratings Certified under ASH & VE Standard Test Code."

FOREWORD

RELIEF FROM HEAT WITH NATURE-CONDITIONED AIR

THE Ventura Home Conditioner, which "cools with nature-conditioned air", is a truly economical and simple system for providing relief from excessive heat during the summer months.

Nearly everyone has experienced the wilting effect of a forced trip to the attic on a hot summer day. The sun beats down on the roof and actually pours heat into the house, just as you would pour hot water into a hot-water bottle, and the attic soon reaches a temperature of 130° F. or more. This heat is absorbed by the house and transferred through the ceilings to the floors below, making the living and sleeping quarters unlivable.

At night the house gives off this accumulated heat very slowly, just like a hot-water bottle, and usually it is four o'clock in the morning before your house is cool enough to sleep in.

Now, it is possible to prevent heat from accumulating in the attic and to cool the house by making use of the inexhaustible quantities of nature-conditioned cooler night air, which is from 15° to 25° cooler than the daytime temperatures. This is accomplished by installing a Ventura Home Conditioner in the attic which will change the air in the entire house sixty times an hour. This rapid air change produces a pleasing air movement throughout the house, prevents the heat during the day from building up in the attic to 130° F. or higher, as it so often does in houses that do not have a Ventura Home Conditioner.

At night the Ventura Home Conditioner is even more effective since it not only produces a pleasant air movement through the house but the air drawn in through windows is from 15° to 25° cooler than the air available during the daytime.

Actual installations demonstrate that when the Ventura Home Conditioner is turned on at night the temperature inside the house will rapidly drop to within one or two degrees of the outside temperature but that this same house without the unit in operation would only drop 5° in temperature even though the temperature outdoors has dropped 15° below the daytime temperature.

Ventura Home Conditioners are available in six sizes to meet the needs for various sizes of houses. It is a product of the American Blower Corporation, a manufacturer of over 50 years' experience in building of all types of air handling and air conditioning equipment. These units are sold, installed and serviced by authorized dealers in nearly every city of the United States. Complete stocks are carried in all trading centers



Here's what happens to your home on a hot summer day.



The attic often reaches a temperature of 130° or more.



At night your house gives off this heat very slowly.



If you could get rid of this heat you'd be cool.



A Ventura Home Conditioner quickly exhausts the hot, stifling air.

VENTURA HOME CONDITIONER APPLICATION



ACTUAL INSTALLATIONS—A Ventura Home Conditioner for every size and type of home from a cottage to a mansion. Six Sizes—Carried in stock in all principal cities—Authorized dealers everywhere.

VENTURA HOME CONDITIONER

UNIT INSTALLED IN CENTER OF ATTIC

The illustration below shows a Ventura Home Conditioner installed in a suction box in the center of the attic of a five-room bungalow. With this method the air is drawn directly from the rooms below, through a grille in the ceiling. In two-story homes the method of installation is the same except the grille will be located in the hallway on the second floor.



Fig. 1

VENTURA HOME CONDITIONER DESIGN DATA

1. Determine Cubical Contents of House

Multiply the length by the width by the height to get the cubical contents of each room. The sum of these volumes equals the cubical contents of the house.

2. Selection of Proper Size Equipment

If the house is a one-story house or bungalow, select a unit which will change the air in the house approximately once per minute. For example, if the cubical contents of the house is 10,000 cubic feet, select Unit Size No. 100, which handles 10,000 cubic feet of air per minute.

In the case of a two-story house having a volume of 15,000 cubic feet, it is customary to select a unit which will change the air in the entire house once every minute and a half. The total volume of air handled by the unit can be used for cooling either the first or the second floor as desired. This is controlled by opening the windows in the rooms which are occupied. A size 100 unit would be suitable for this job.

3. Location of Unit

The Ventura Home Conditioner can be located in a suction box in the center of the attic, as shown in Figure 1, page 3, or if the roof is fairly air-tight and if it is more desirable, from an architectural standpoint, to locate the Ventura Home Conditioner in one of the side walls of the attic space, it can be located as shown in Figure 10, page 8.

4. Suction Box

The suction box should be made of Celotex or soft Masonite or any similar soft sound-absorbing material.

You will note that sketches show all of the framing on the outside of the box so that the inside will be as smooth as possible and not obstruct air flow. All units are connected to suction box by a canvas connection so as to prevent vibration being transmitted to the home.

The dimensions of the suction box for any particular size unit is shown on page 4.

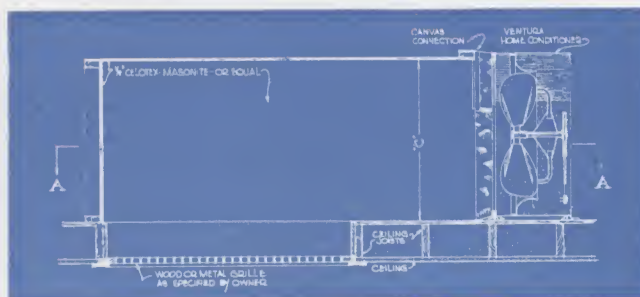


Fig. 2
Elevation—Section Through X-X

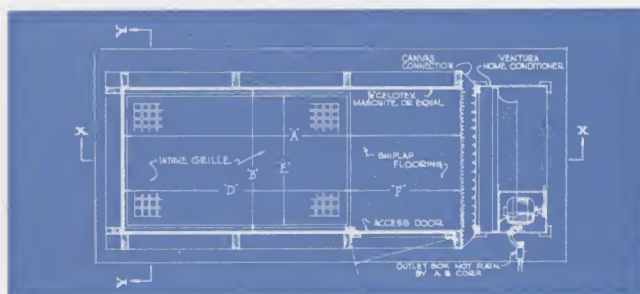


Fig. 3
Plan—Section Through A-A



Fig. 4. Section Through Y-Y

DIMENSIONS OF SUCTION BOX

Fan	A	B	C	D	E	F
75	90	39	39	60	36	30
100	98	46	46	68	36	30
130	118	54	54	88	36	30
160	126	54	54	96	42	30
190	126	60	60	96	48	30
215	126	60	60	96	54	30

5. Exhaust Openings in Attic Space to Outdoors

If the unit is located in a suction box the air handled by the unit is discharged into the attic space, therefore openings in the attic must be provided so that this air can get out of the attic. This can be accomplished in three ways: (1) By cutting openings in the eaves and covering with hail screen. (2) Opening windows already available in the attic. (3) Providing louvers in the side walls of the attic or in a dormer, or an outlet in ceiling of porch. The total net area of the openings in the attic must equal the area recommended for the grilles. If the unit is installed in the side wall of the attic, streamline louvers can be framed in the wall through which the unit discharges and in this case no further openings are required. See Fig. 12, Page 9.

VENTURA HOME CONDITIONER DESIGN DATA

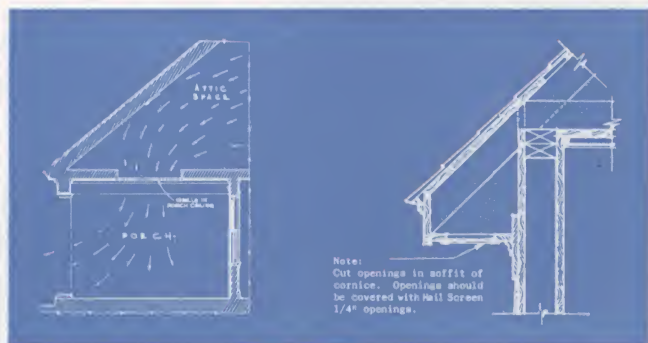
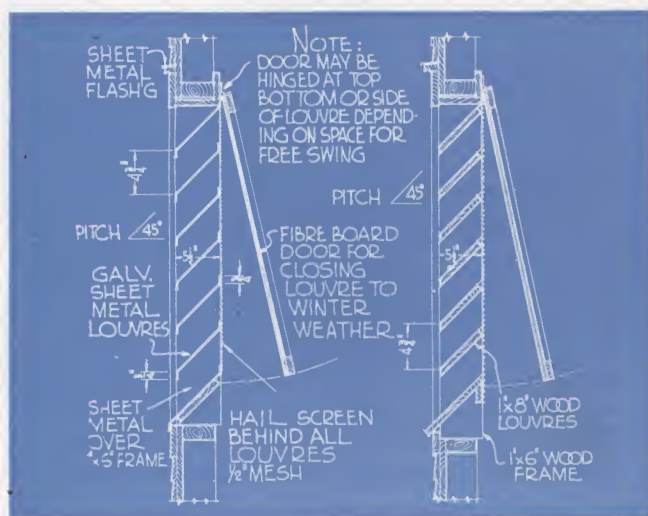


Fig. 5
Methods of Venting Attics



Fig. 6
Typical Designs of Louver Construction



Metal Louver Fig. 7 Wood Louver

DIMENSIONS

Fan	*Net Louver Area	Over-all Metal Louver	Over-all Wood Louver
75	11.25 sq. ft.	16.2 sq. ft.	22.50 sq. ft.
100	15	21.5	30
130	19.5	27.8	39
160	24.0	34.2	48
190	28.5	40.7	57
215	32.25	46	64.5

*Based on Construction Shown—Fig 7

6. Grille Sizes

If the unit is located in a suction box, provide a grille in the floor of the suction box so that the air will be exhausted from a central hallway below. If grilles are provided, use grilles having approximately 85% free area and of sufficient face area so that the air velocity through the grille will not exceed 700 ft. per minute as a maximum. If space permits, even lower velocities are desirable to make the installation as quiet as possible. Between 500 and 700 ft. per minute face velocity is considered good practice for this class of work.

If the unit is installed in a side wall of the attic and there is a stairway to the attic, no grilles are necessary as the air can enter the attic space through the doorway. See Fig. 10, Page 8.

Below is shown the recommended grille size for each size unit. For example, the Size 100 unit requires a grille $67\frac{3}{4}'' \times 35\frac{3}{4}''$. The grille can be made either of wood or of expanded metal. In either case a grille having approximately 85% free area should be used.

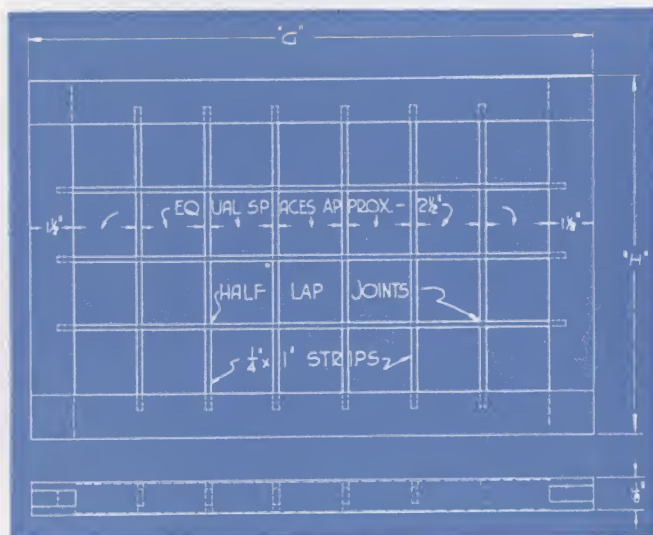


Fig. 8

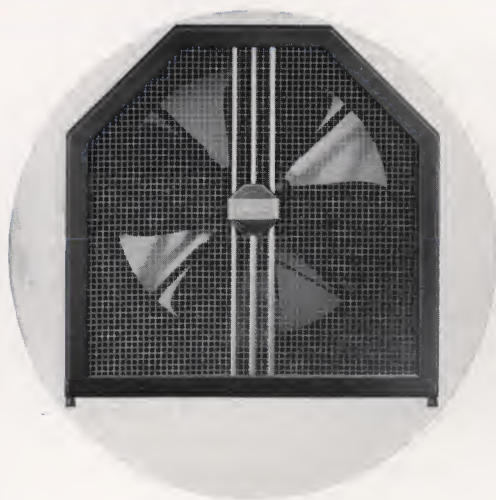
This type of wood grille is recommended and can be made locally.

SIZES OF GRILLES

Fan Size	"G"	"H"	Fan Size	"G"	"H"
75	$59\frac{3}{4}$	$35\frac{3}{4}$	160	$95\frac{3}{4}$	$41\frac{3}{4}$
100	$67\frac{3}{4}$	$35\frac{3}{4}$	190	$95\frac{3}{4}$	$47\frac{3}{4}$
130	$87\frac{3}{4}$	$35\frac{3}{4}$	215	$95\frac{3}{4}$	$53\frac{3}{4}$

COMFORT • COOLING

VENT Home Co THE ONLY ATTIC OF THESE EXCL



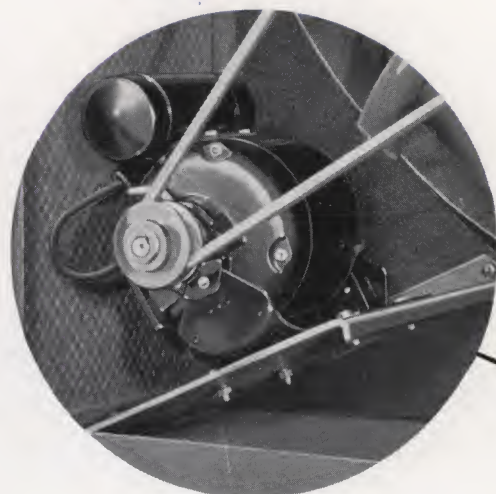
GRILLE

Attractive decorative grille furnished at slight extra cost serves as a safety guard in exposed public places.



TAPERED TOP

To facilitate installation where attic space is limited.



MOTOR

Totally enclosed quiet-operating motor, rubber mounted, automatic belt tightener, thermo-tector overload protection.



SOUND DEADENER

Rubber mounted to eliminate all transmission of sound and vibration to the home.



SIZE	CFM Free Delivery	RPM	HP	WA INF
75	7500	448	1/4	20
100	10000	338	1/4	27
130	13000	258	1/4	28
160	16000	326	1/2	50
190	19000	266	1/2	52
215	21500	298	3/4	83

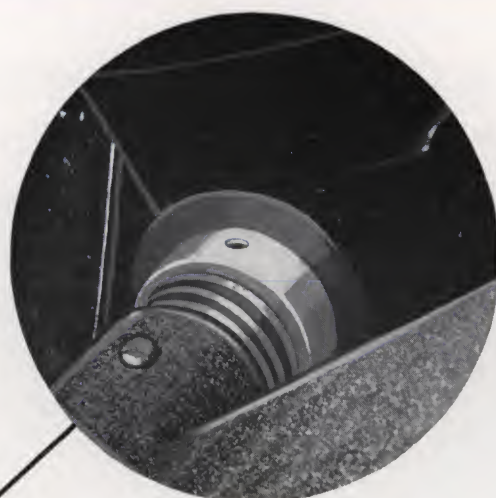
CERTIFIED RATINGS

Air deliveries are in accordance with the standard test code for proper fans adopted by the American Society of Heating and Ventilating Engineers.

COMFORT • COOLING

VENTURA Conditioner

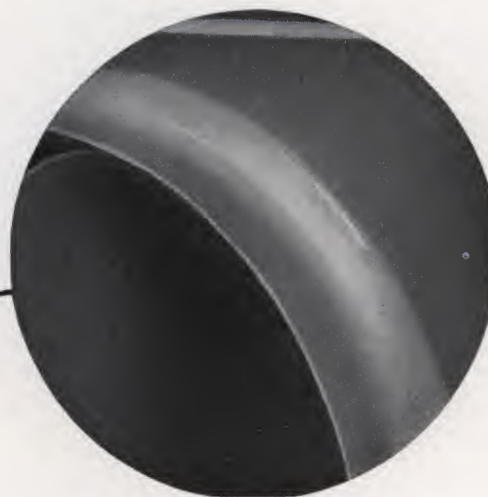
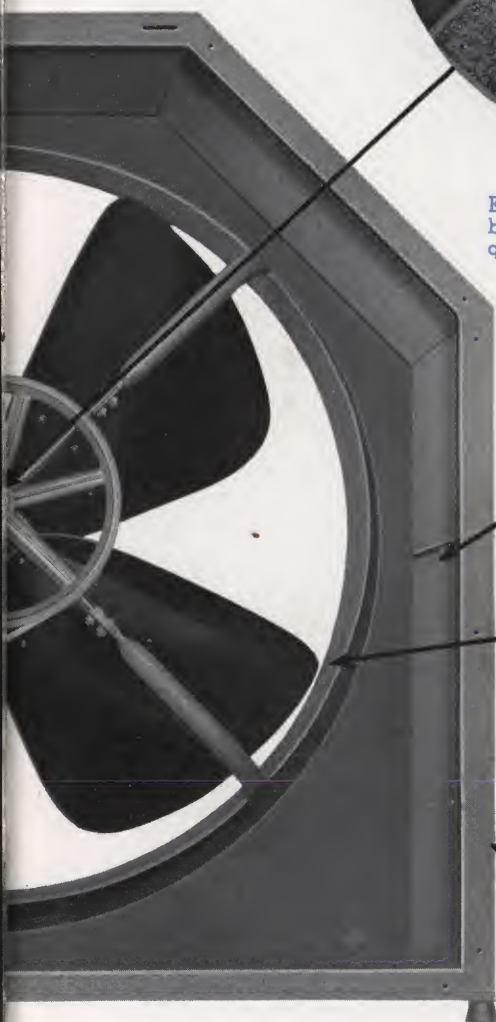
FAN WITH ALL
EXCLUSIVE FEATURES



THRUST COMBINATION
End thrust and spring plate
bearing mounting to insure
quiet operation.



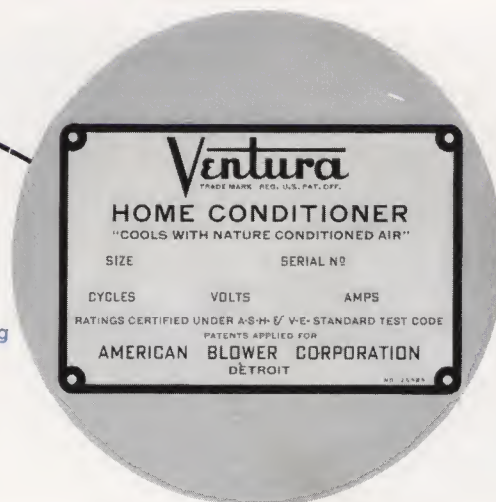
**ACOUSTICALLY TREATED
STEEL HOUSING**
All housings sound treated to pro-
vide overall quietness in operation.
Black Morocco Crinkle Finish



STREAMLINED INLET
One of the most important features of
fan design. This inlet offers least
resistance to air flow, saves power and
insures quiet operation.

TS JT	WEIGHTS		OVER-ALL SIZE		
	Net Weights	Shipping Weights			
	120	190	Width	Height	Depth
			36 $\frac{1}{8}$ "	x 39 $\frac{1}{8}$ "	x 18"
	210	268	46 $\frac{1}{8}$ "	x 46 $\frac{1}{8}$ "	x 21"
	270	352	54 $\frac{1}{8}$ "	x 54 $\frac{1}{8}$ "	x 24"
	305	386	54 $\frac{1}{8}$ "	x 54 $\frac{1}{8}$ "	x 24"
	357	437	60 $\frac{1}{8}$ "	x 60 $\frac{1}{8}$ "	x 24"
	370	450	60 $\frac{1}{8}$ "	x 60 $\frac{1}{8}$ "	x 24"

NAME PLATE
Look for the Certified Rating
Nameplate.



PATENTS

The design of this unit and many of its exclusive
features are covered by patents pending.

VENTURA HOME CONDITIONER UNIT INSTALLED IN OUTSIDE WALL



Fig. 9

Interior view showing unit in outside wall with streamline louvers



Fig. 10

Cross section view showing unit in outside wall

With this method of installation the entire attic space is used as a suction chamber. This method can only be used in houses where the roof is practically air-

tight. The air enters the attic space from the rooms below through the stairway, trap door or grilles provided in ceiling below.

STREAMLINED LOUVERS

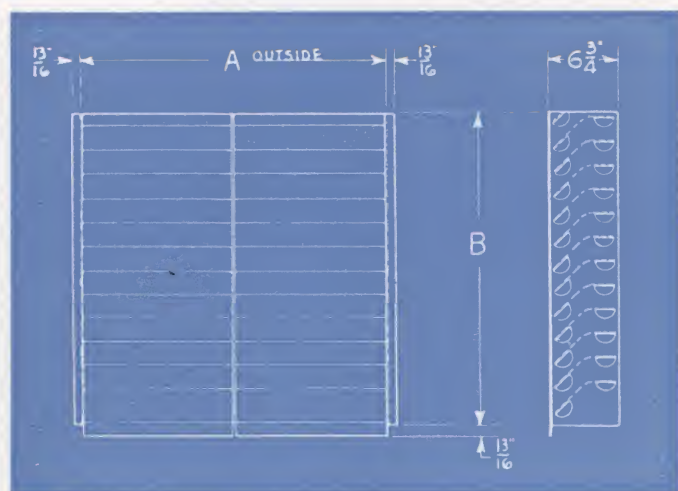


Fig. 11

DIMENSIONS

V.H.C. Unit Size	Louver Size	A	B
75	W	36 ⁵ / ₈	37 ¹ / ₄
100	X	46 ⁵ / ₈	47 ¹ / ₄
130 or 160	Y	54 ⁵ / ₈	55 ¹ / ₄
190 or 215	Z	60 ⁵ / ₈	61 ¹ / ₄

Sizes X-Y-Z are made in two pieces—size W is made in one piece, for easy handling

VENTURA HOME CONDITIONER UNIT INSTALLED IN OUTSIDE WALL

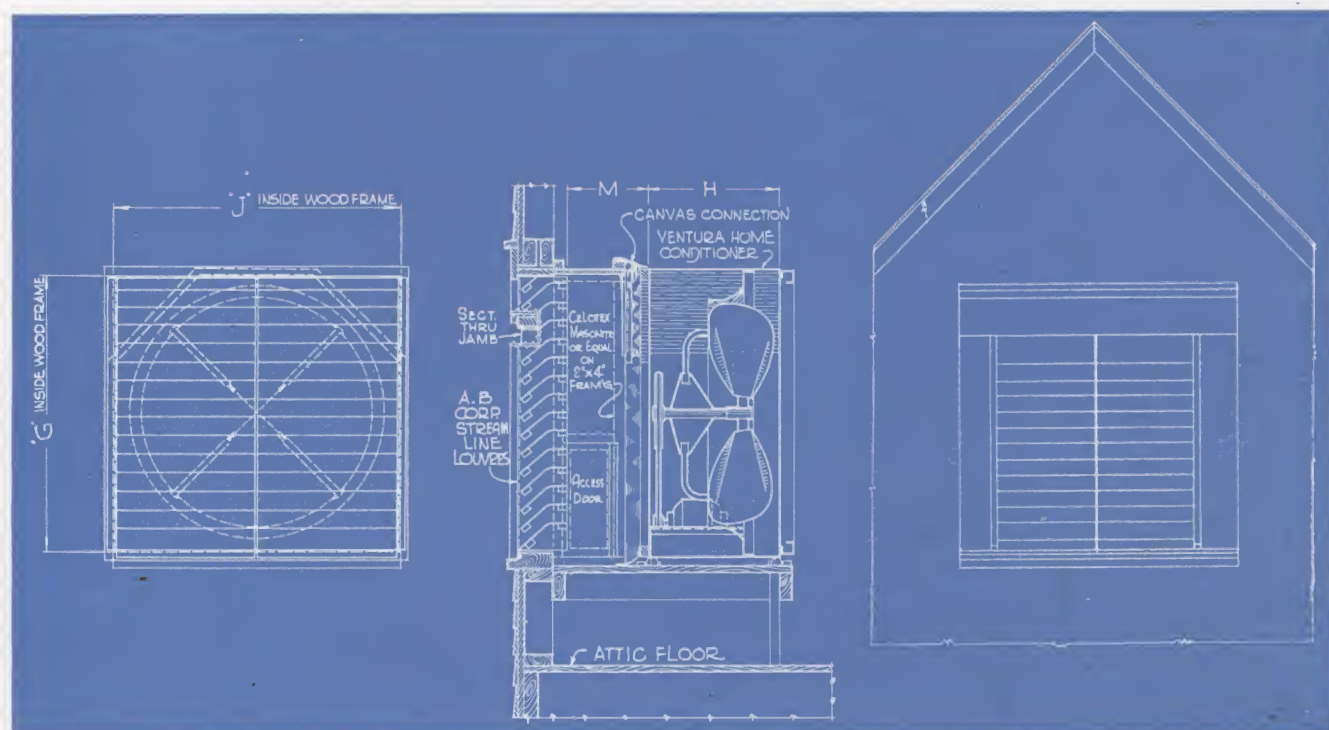


Fig. 12

SIZE	G	H	J	M
75	37 $\frac{1}{2}$	18	36 $\frac{7}{8}$	18
100	47 $\frac{1}{2}$	21	46 $\frac{7}{8}$	18
130	55 $\frac{1}{2}$	24	54 $\frac{7}{8}$	18
160	55 $\frac{1}{2}$	24	54 $\frac{7}{8}$	18
190	61 $\frac{1}{2}$	24	60 $\frac{7}{8}$	18
215	61 $\frac{1}{2}$	24	60 $\frac{7}{8}$	18

VENTURA HOME CONDITIONER

DIMENSIONS

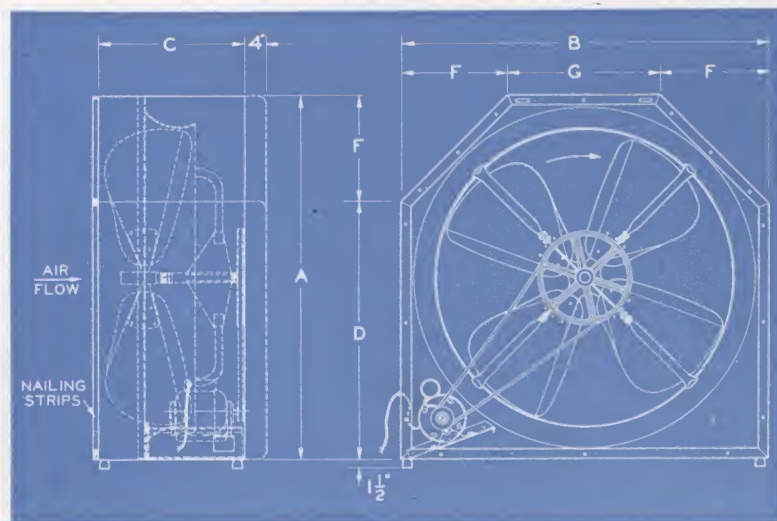


Fig. 13

SIZE	A	B	C	D	F	G
75	39 $\frac{1}{8}$	36 $\frac{1}{8}$	18	28 $\frac{3}{8}$	10 $\frac{5}{8}$	14 $\frac{7}{8}$
100	46 $\frac{1}{8}$	46 $\frac{1}{8}$	21	32 $\frac{1}{2}$	13 $\frac{1}{2}$	19 $\frac{1}{8}$
130	54 $\frac{1}{8}$	54 $\frac{1}{8}$	24	38 $\frac{1}{4}$	15 $\frac{7}{8}$	22 $\frac{3}{8}$
160	54 $\frac{1}{8}$	54 $\frac{1}{8}$	24	38 $\frac{1}{4}$	15 $\frac{7}{8}$	22 $\frac{3}{8}$
190	60 $\frac{1}{8}$	60 $\frac{1}{8}$	24	42 $\frac{1}{2}$	17 $\frac{5}{8}$	24 $\frac{7}{8}$
215	60 $\frac{1}{8}$	60 $\frac{1}{8}$	24	42 $\frac{1}{2}$	17 $\frac{5}{8}$	24 $\frac{7}{8}$

Interchangeable Nailing Strips for Canvas Connection Are 1 $\frac{3}{4}$ " x $\frac{3}{4}$ " White Pine. Canvas Connections and Nailing Strips Furnished With Unit

Add 1 $\frac{1}{2}$ " to Dimension A when mounted on rubber dampeners.

VENTURA PORTABLE CONDITIONER APPLICATION

Many people who live in apartments, income bungalows, or rented homes would like to enjoy the comfort cooling benefits of attic ventilation but cannot install a Ventura Home Conditioner because of limited space, lack of any attic space or because they do not want to make a permanent installation.

The Ventura Portable Conditioner has been designed to meet this demand. This unit is actually portable. It requires no installation expense, no cutting or patch-

fine work table. The large drawer provides useful storage space for kitchen utensils.

This unit was thoroughly tested both in the north and the south and was found to be the most practical and satisfactory method for providing comfort cooling in apartments. It was found that in apartments that were so unbearably hot that tenants would be forced to move out in order to be able to get a good night's rest that the Ventura Portable Conditioner made such apartments livable, cool and comfortable.

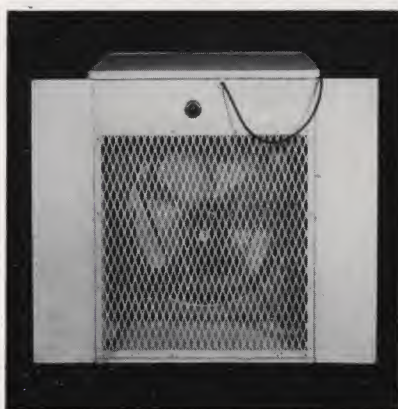


Fig. 14



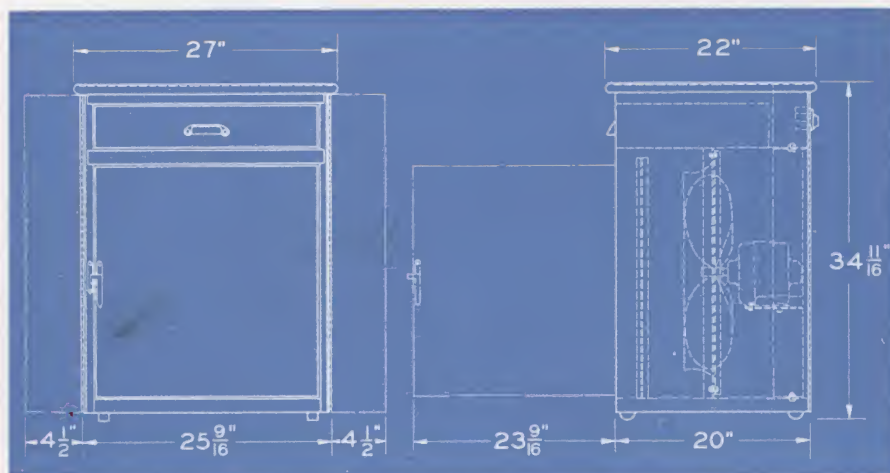
Fig. 15



Fig. 16

ing, no grilles of any kind. It is self-contained and can be set up in a few minutes ready to operate. It is not necessary to store this unit in the basement or closet when not in use since it is housed in an attractive utility cabinet which will harmonize with the standard equipment of any kitchen. It is finished in refrigerator white enamel and has a porcelain top which makes a

The Ventura Portable Conditioner handles 3780 cubic feet of air per minute on high (1080 R.P.M.) and 2500 C.F.M. on low (715 R.P.M.) and naturally its use is limited to smaller apartments or two or three rooms of a large apartment since it is necessary to change the air once a minute to do a good comfort cooling job. These capacities are for 60 cycle, 1 phase current.



The design of this unit and many of its exclusive features are covered by patents pending.

Fig. 17

DESCRIPTION

The Ventura Portable Conditioner is composed of two parts, the cabinet and the folding screen. The fan assembly consists of a powerful, quiet operating new design four-bladed wheel direct connected to a $\frac{1}{6}$ H. P. totally enclosed, capacitor type, two-speed motor rubber mounted. The assembly is housed in a furniture steel cabinet, finished in refrigerator white with porcelain top with safety guards front and rear. The unit is mounted on rubber tired castors to permit easy handling. A folding screen, 34" x 50", light in weight and easily handled is furnished with each unit so that the upper part of the doorway can be blocked off to prevent recirculation of air.

VENTURA PORTABLE CONDITIONER OPERATION

The principle is the same as attic ventilation except that the kitchen is used as a plenum chamber instead of the attic and the air handled by the unit finds its way out of the kitchen windows.

To operate the unit, plug in the socket and open the door of the cabinet, also be sure that all of the kitchen windows are open.

Then move the cabinet to the doorway (with cabinet door opening toward the kitchen) and extend the

as desired. The air handled by the unit enters the rear of the cabinet and discharges into the kitchen where it finds its exit through the kitchen windows.

The final step is to open the windows of the rooms to be cooled. Before retiring it is suggested that the living-room windows be opened and the bedroom doors or windows be kept closed. This will enable the full benefits of the unit to be felt in the living-room. When ready to retire, close the living-room windows and open



Fig. 18



Fig. 19



Fig. 20

wings on each side of the cabinet so they touch the door frame and block off the opening. See Fig. 18. Next unfold the screen and hang from hooks, which are provided, so that the space above the cabinet is blocked off. See Fig. 19.

The illustration in Fig. 20 shows the unit from the dining-room side with the black screen in position. The bottom of the screen extends just below the top of the cabinet to completely shut off the opening. The unit is now ready to operate and the switch can be turned on to run the unit on high or low speed

the bedroom windows so that the full capacity of the unit is utilized in cooling the bedrooms. The sketch below shows an actual installation in an apartment. The path of the air is indicated by arrows.

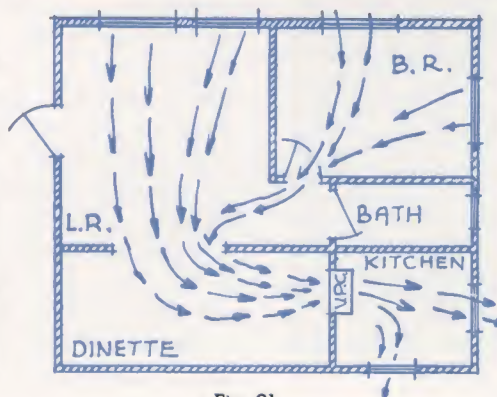


Fig. 21

On this particular installation the inside room temperature was reduced from 96° F. at 7:00 P. M. to within 2° of the outside temperature 84° F. within one hour's time.

When the unit was not operated the inside temperature remained high until early morning.

AEROPEL ELECTRIC VENTILATOR APPLICATION

The first part of this catalog deals with the application of the Ventura Home Conditioner for providing summer comfort in homes of all sizes and types. Next the Ventura Portable Conditioner was described and illustrated showing how to apply the general principles of attic ventilation to a small apartment or two or three rooms of a rented home where it is impossible to install the larger Ventura Home Conditioner in the attic space to take care of the entire house.

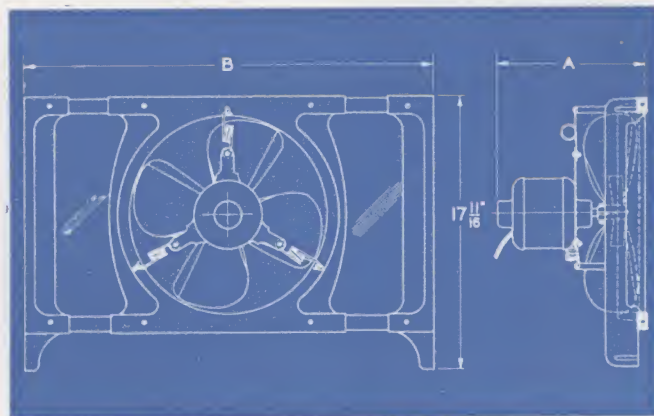
The Aeropel Electric Ventilator described below takes

care of a special application such as a one-room efficiency apartment, hotel room, or individual bedroom that cannot be handled in the conventional method as covered by the Ventura Home Conditioner or the Ventura Portable Conditioner. The photograph shown on this page illustrates an Aeropel Ventilator in an average sized bedroom. Since a good Comfort Cooling job requires an air change approximately once per minute, the efficiency of this unit is limited to one room.



Fig. 22

DESCRIPTION OF UNIT



Dim. A = $9\frac{5}{8}$ ", Dim. B = 22" Min., 72" Max.

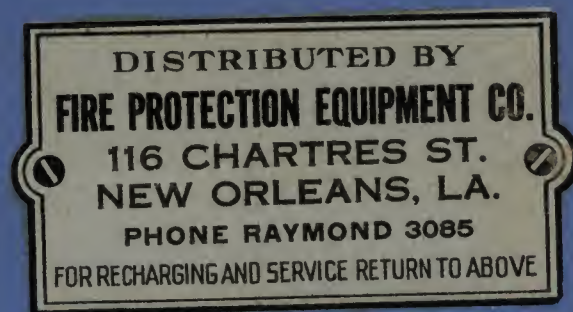
The Aeropel Electric Ventilator Model 12B for window installation, consists of a four-bladed aluminum wheel with motor, spring mounted to a baked enamel window frame with glass panels. The quiet-operating motor is totally enclosed, three speed reversible, 1100/880/680 rpm. The motor is furnished with rubber-covered four-wire conductor cord, a four-pole disconnect plug, 10 feet of rubber-covered four-wire conductor cord, 10 feet of rubber-covered two-wire conductor cord. Control box with three-speed switch and reversing switch, and the necessary rails, glass and window poles for opening and closing window. This unit has a capacity of 1200 cfm. on high, 950 cfm. on medium and 740 cfm. on low speed.

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of

AMERICAN BLOWER CORPORATION

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NEWARK, N. J.		247-9 High Street
NEW HAVEN, CONN.	326 Chamber of Commerce Bldg.	
NEW ORLEANS, LA.		846 Baronne Street
NEW YORK, N. Y.		Room 601, 50 W. 40th Street
OMAHA, NEBR.	727 W. O. W. Bldg.	
PHILADELPHIA, PENNA.	781 Broad St. Station Bldg.	16th St. and Pennsylvania Blvd.
PITTSBURGH, PENNA.	1433 Oliver Bldg.	
PORTLAND, OREGON	Pacific Bldg.	306 Yamhill Street
RICHMOND, VA.		7 N. 6th Street
ROCHESTER, N. Y.	Bldrs. Exchange Bldg.	135 Spring Street
ROCK ISLAND		1617 2nd Avenue
ST. LOUIS, MO.	Railway Exchange Bldg.	611 Olive Street
SALT LAKE CITY, UTAH	Dooly Bldg.	109 West 2nd South
SAN FRANCISCO, CALIF.	1414 Bank of America Bldg.	625 Market Street
SCHENECTADY, N. Y.		511 State Street
SEATTLE, WASH.		1534 First Avenue, S.
SOUTH BEND IND.	803 Sherland Bldg.	
TAMPA, FLORIDA		107 S. Franklin Street
TOLEDO, OHIO		1510 Elm Street
WASHINGTON, D. C.	Woodward Bldg.	15th and H Streets, N. W.



Bulletin A4913

Superseding A3713

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